

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 29-55 are presently active in this case. The present Amendment amends Claim 29, 35-36, and 50 without introducing any new matter.

The outstanding Office Action rejected Claims 29-39 and 41-52 under 35 U.S.C. § 103(a) as unpatentable over Boucher (U.S. Patent No. 3,561,444). Claims 40 and 53-55 were indicated as allowable if rewritten in independent form.

Applicants acknowledge with appreciation the indication of allowable subject matter. However, because Applicants believe that independent Claim 29 defines patentable subject matter, Claims 40 and 53-55 are maintained in dependent form at present time.

Independent Claim 29 and dependent Claims 35, 36 and 50 are amended to clarify some minor formal issues. Because these changes are only formal in nature, no new matter has been added by these amendments.

In response to the rejection of Claims 29-39 and 41-52 under 35 U.S.C. § 103(a), Applicants respectfully request reconsideration of this rejection and traverses the rejection, as discussed next.

Briefly recapitulating, Applicants' independent Claim 29 is directed to an electrical contact member suitable for electrically interconnecting two conductive members, the two conductive members movable relative to each other, and are part of medium-voltage or high-voltage electrical apparatus. The contact member includes a strength-imparting base layer made of an electrically conductive material; and a coating layer formed from metallic silver and configured to come into contact with the two conductive members, the coating layer being present over at least a portion of an outer surface of the base layer, wherein the coating layer has a micro-structure formed by pure silver crystals, with a presence of nodules made of

silver and of an additional metallic material formed by at least one additional metal that is different from silver, the additional material being present in the coating layer in a proportion of less than 1% by weight, or less than 0.5% by weight, and or less than 0.1% by weight.

As explained in Applicants' specification, the coating layer of the electrical contact member has a specific micro-structure. It is a micro-structure that has pure silver crystals and nodules made of silver and of an additional metallic material that is different from silver, as shown in Applicants' independent Claim 1. This particular micro-structure, as required by independent Claim 1, imparts unexpected and superior properties in terms of electrical conduction *and* improved mechanical properties of hardness to the coating layer. (See specification, p. 7, ll. 1-12.) Applicants' specification explains at page 7 that "the additional material guarantees that the mechanical properties of the coating layer are improved . . . thus make it possible to prevent to coating layer from wearing quickly due to the contact member rubbing against the two electrically conductive members." (See specification, p. 7, ll. 6-18.) Applicants' specification further explains that these features are important for an electrical contact member that is used for electrical interconnection of a medium-voltage or high-voltage electrical apparatus, because the contact member may move at high speeds, is exposed to high temperatures, and requires high chemical resistance. (See specification, from p. 4, l. 18, to p. 5, l. 10.) Moreover, Applicants' specification makes it unmistakably clear that a contact member that is purely made of silver is unsatisfactory for the required mechanical strength. (See specification, from p. 7, ll. 19-24.)

Turning now to the applied reference, Boucher is directed to an ultrasonic drug nebulizer 10 used to form droplets of a medical solution. (Boucher, Abstract, Fig. 2.) Boucher's Figures 3-4 show a transducer using a piezo-electric element (Boucher, ref. num. 11, 12, and 30-34, Figs. 2-4.) This transducer is used to generate ultrasonic waves that can nebulize medicaments 15 held in a aerosol chamber 13. (Boucher, col. 4, ll. 63-73.)

Ultrasonic waves are generated by a thin piezo-electric disk 30 having a diameter of 0.75 inches, and the upper and lower layers of the piezo electric disk 30 are coated with two layers 31, 33, and 32, 34, respectively. (Boucher, col. 5, ll. 20-30, Fig. 4.) These coating layers can be made of metal, such as gold, platinum, iridium, or silver. (Boucher, col. 5, ll. 30-32.) Boucher clearly fails to teach the features of Applicants' Claim 29 coating layer. In particular, Boucher fails to teach:

. . . the coating layer has a micro-structure formed by pure silver crystals, with a presence of nodules made of silver and of an additional metallic material formed by at least one additional metal that is different from silver, the additional material being present in the coating layer in a proportion of less than 1% by weight, or less than 0.5% by weight, and or less than 0.1% by weight.

(Claim 29, portions omitted.) The pending Office Action asserts that these features are obvious for one of ordinary skill in the art. (Office Action, from p. 2, l. 22, to p. 3, l. 3.) The Office Action contends in these passages that "it has been held to be within general skill in the art to select a known material on the basis of suitability for the intended use as a matter of obvious design choice." Applicants respectfully disagree with this assertion, as next discussed.

First, Boucher himself explains that his coating layers 31-34 serve to provide "good electrical contact with the crystal body," and mentions that the use of metal is satisfactory for that purpose. (Boucher, col. 5, ll. 30-32.) Moreover, Boucher never mentions that his solution requires hardened electrical contact members. Boucher explains that the electric contact to the bottom layer 34 is made by an extending leg 36a, and the electric contact to the upper layer 31 is made by direct contact to base 12. (Boucher, col. 5, ll. 41-50.) Because this structure is clamped with clamping screw 35, there is absolutely no need for special hardening. (Id.) To the contrary, due to this stationary mechanical connection to feed the piezo-electric disk 30 with electricity, it would be advantageous that the layers 31, 34 are soft

and not hardened. Accordingly, Applicants traverse the Office Action's statement that there could be an "intended use" of the nodules of Applicants' Claim 29 for electrically connecting Boucher's piezoelectric disk 30 on the basis of suitability.

Second, Applicants' Claim 29 does not simply require an additional "known material," but requires a distinct micro-structure that includes "nodules made of silver and of an additional metallic material formed by at least one additional metal that is different from silver, the additional material being present in the coating layer in a proportion of less than 1% by weight, or less than 0.5% by weight, and or less than 0.1% by weight." The pending Office Action has not even made a case to show if these nodules as recited in Applicants' independent Claim 29 are known at all. Moreover, these nodules are clearly not a simple additional material, as contended by the pending Office Action.

Third, the case cited by the pending Office Action *In re Leshin*, does not support the Office Action's reasoning of obviousness. *In re Leshin*, 125 USPQ 416. In the claims at issue in that case, directed to a liquid-tight and air-tight container-dispenser, Appellant acknowledged that the prior art already taught a container made of plastic, but explained that "applicant has had to select them for his particular purpose" in support of his arguments against an obviousness rejection. *Id.* at 417 The claim did not specify what kind of plastic has to be used, but merely indicated its intended use. *Id.* The court held that a mere selection of known plastics to make a container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious. *Id.* at 418.

As explained above, Applicants' Claim 29 does not recite any "intended use" limitation, but a distinct structural limitation. In addition, the pending Office Action has failed to show that the "nodules" are known as claimed. Therefore, *In re Leshin* cannot be used as a basis for the alleged obviousness.

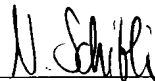
Accordingly, Applicants respectfully submit that Claim 29 is not obvious in light of the reference Boucher, and therefore respectfully request reconsideration of this rejection under 35 U.S.C. § 103(a).

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 29-55 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

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